

Appl. No. : 10/796,767
Filed : March 9, 2004

COMMENTS

Claims 1 -- 21 are now pending in the present application, Claims 1, 14, and 15 having been amended, and new Claims 19 -- 21 having been added. The claims set forth above include marking to show the changes made by way of the present amendment, deletions being in ~~strikeout~~ and additions being underlined.

In response to the Office Action mailed July 27, 2005, Applicant respectfully requests the Examiner to reconsider the above-captioned application in view of the foregoing amendments and the following comments.

Amendments To Specification Address Noted Informalities

The foregoing amendments to the specification correct minor informalities recently noted by the Applicant. In particular, Applicant has amended paragraph numbers [0069], [0070], and [0079] to change the question marks ("??") to the Greek symbol Θ . The amendments do not add new matter and thus entry of the amendments is respectfully requested.

Amendments To The Claims Address Noted Informalities

Claims 15 -- 18 stand objected to for containing informalities. In response to the objection to Claim 15 based on the lack of antecedent basis for the term "the signal" applicant has amended Claim 15 to recite "if the watercraft hull overturns." Applicant submits that this amendment was made solely to make the claims more easily readable, and not to narrow or to affect the scope of the claims. Thus, Applicant submits that all equivalents of the originally recited step are also equivalents of the now recited step of Claim 15.

Japan '486 Does Not Anticipate Claims 1 -- 9 And 11 -- 18

Claims 1 -- 9 and 11 -- 18 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Japan '486. Applicant respectfully traverses the present rejection. However, in order to expedite prosecution of the present application, Applicant has amended Claim 1. Applicant also expressly reserves the right to further prosecute the original versions of Claims 1 -- 21 through continuation practice.

Firstly, for the Examiner's convenience, Applicant would like to note that the Japan '486 reference corresponds to United States Patent No. 6,419,531, issued to Nanami et al. of record. Thus, hereinafter, Applicant refers to the Nanami et al. reference with regard to the present rejection.

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Nanami et al. teaches a personal watercraft having an internal combustion engine and a sensor configured to determine when the watercraft overturns. For example, as shown in Figure 12 of Nanami et al., an overturn switch 402 is used to determine when the watercraft 10 overturns.

When the watercraft 10 overturns, the electronic control unit 154 shuts-off the engine 12. Additionally, the electronic control unit 154 closes valves 77, 79 that are disposed in a ventilation system of the watercraft 10.

The ventilation system of the watercraft 10 of the Nanami et al. reference, includes air ducts 76, 78 which are configured to allow air from the atmosphere to enter and exit the engine compartment of the watercraft 10 in which the engine 12 is disposed. The engine 12 also includes an intake system 160 for guiding air into the combustion chambers of the engine 12. The intake system 160 includes a throttle valve 174 for metering the flow of air into the combustion chambers of the engine 12.

Nothing in Nanami et al. indicates that the throttle valve 170 moves to a fully closed position when the engine 12 is shut-off by the electronic control unit 154. Rather, as expressly noted in the Nanami et al. reference, in order to shut-off the engine, the shut-off system 400 stops "the supply electricity to the spark plugs 154 or by clos[es] the fuel injectors 246." Thus, one of ordinary skill in the art would understand that when the engine 12 of Nanami et al. is shut off, or if the throttle lever used by the operator of the watercraft 10 is released, the throttle valve 170 returns to an idle speed condition so as to allow the engine to operate at an idle speed condition.

As such, nothing in Nanami et al. teaches a blocking device disposed in the intake system of the watercraft which guides air from the engine compartment of the watercraft to the combustion chambers of the engine, wherein the blocking system fully closes the intake system when the watercraft overturns.

In contrast, Claim 1 now recites a watercraft having "an intake system through which air is delivered from the engine compartment to a combustion chamber of the engine, a sensor arranged to detect overturn of the hull, a control device configured to stop and operation of the engine based upon an output from the sensor, and a blocking device arranged in the air intake system to fully close the intake system so as to prevent water from moving through the intake system toward the combustion chamber under control of the control device."

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Similarly, Claim 14 now recites a "watercraft comprising a hull, an engine compartment defined within the hull, an internal combustion engine disposed in the engine compartment, an intake system configured to guide air from the engine compartment into a combustion chamber of the engine, a sensor arranged to detect overturn of the hull, means for stopping an operation of the engine based upon an output of the sensor, and means for inhibiting water from moving through the intake system toward the combustion chamber based upon the output of the sensor.

Finally, Claim 15 now recites a method inhibiting water from entering a combustion chamber of an engine that includes an intake system having an air conduit extending from a space outside the engine to a combustion chamber of the engine, comprising determining whether a watercraft hull overturns, stopping an operation of the engine if the watercraft hull overturns, and blocking water from moving through the intake system toward the combustion chamber if the watercraft hull overturns."

Applicant respectfully directs the Examiner to paragraph numbers [0069], [0070], and [0079] of the present Application in which the present Application makes a clear distinction between the opening of the throttle valve 198 in an idle speed range and the movement of the throttle valve 198 to a another position when the watercraft overturns. In particular, the specification explains that:

[0069] The throttle valve 198 preferably moves between a fully open position θ_o and a fully closed position θ_c . The closer the valve disc 202 approaches the fully open position θ_o , the larger the amount of the air or airflow rate is. Unless the environmental circumstances change, an engine speed and power output of the engine 72 increases generally along with increases in the air amount or airflow rate.

[0070] When the operator detaches his or her hand from the throttle valve control lever 50, the throttle valve 198 returns to a mechanically held position θ_m , which is equal to an initial idle position θ_i , at which the throttle valve 198 slightly opens from the fully closed position θ_c . In the illustrated embodiment, the throttle valve 198 also returns to the mechanically held position θ_m whenever the ECU 180 is deactivated. An air amount at the idle position θ_i can keep the engine operation at idle. The idle position θ_i can move from the initial position in a small range by controls of the ECU 180 such as, for example, an idle speed control.

[0079] For example, the ECU 180 can be configured to activate the throttle valve actuator 210 and optionally, the shut-off valve actuators 90. The throttle valve actuator 210 can be configured to set the throttle valve 198 to the fully closed position θ_c or at least a shut-off position θ_t that is almost equal to the fully closed position θ_c and can sufficiently inhibit water from

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entering the intake chamber 192. The open degree of the shut-off position θ_t can be smaller than any one of the idle position θ_i , the mechanically held position θ_m , and the start position θ_s even though the throttle valve 198 remains partially open in the shut-off position θ_t . The shut-off valve actuators 90 also set the shut-off valves 86, 88 to the closed position.

Thus, Applicant submits that the present specification, as well as the present recitations of Claims 1, 14, and 15, clearly distinguish between an idle speed of the throttle valve or a blocking device and a fully closed position. Thus, because Nanami et al. does not teach a system which fully closes the intake system of the engine when an overturn is detected, Applicant submits that Claims 1, 14, and 15 clearly and non-obviously defines over Nanami et al.

Additionally, Applicant submits that Claims 2 -- 9 and 11 -- 18 also define over the Nanami et al. reference, not only because they depend from Claim 1, but also on their own merit.

The Applied Combination of Japan'486/Takashima Does Not Make Claim 10 Obvious

Claim 10 stands rejected under 35 U.S.C. § 103(a) as being obvious over Japan'486 in view of Takashima. Applicant respectfully traverses the present rejection. However, as noted above, Applicant submits that Claim 1 patentably defines over the applied references. Thus, Applicant submits that Claim 10 also defines over the applied references, not only because it depends from Claim 1, but also on its own merit.

New Claims 19 -- 21 Also Define Over The Cited References

Submitted herewith are new Claims 19 -- 21 which are fully supported by the original specification as originally filed. Support for new Claims 19 -- 21 appears in at least paragraph numbers [0069], [0070], and [0079], which have been amended herewith as noted above. Thus, no new matter has been introduced. Additionally, Applicant submits that Claims 19 -- 21 clearly and non-obviously define over the cited references. For example, Claim 19 defines over the applied references at least because it recites closing a throttle valve further beyond the idle speed range of the throttle valve movement in response to overturning of the watercraft, which is not taught by any of the applied prior art references.

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CONCLUSION

For the foregoing reasons, it is respectfully submitted that the rejections set forth in the outstanding Office Action are inapplicable to the present claims. Accordingly, early issuance of a Notice of Allowance is most earnestly solicited.

The undersigned has made a good faith effort to respond to all of the rejections in the case and to place the claims in condition for immediate allowance. Nevertheless, if any undeveloped issues remain or if any issues require clarification, the Examiner is respectfully requested to call Applicant's attorney in order to resolve such issue promptly.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

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By: 

Michael A. Guiliana
Registration No. 42,611
Attorney of Record
2040 Main Street
Fourteenth Floor
Irvine, CA 92614
(949) 760-0404

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